

Application No.: 09/588,852

IN THE SPECIFICATION:

Please amend the specification as follows:

Please replace the paragraph under "Related Applications", beginning on page 1, line 10, with the following amended paragraph:

--This application is a continuation-in-part of U.S. Patent Application Serial No. 09/443,712 filed November 19, 1999, which is a continuation-in-part of U.S. Patent Application Serial No. 09/205,809 filed December 4, 1998 (now U.S. Patent No. 6,324,183), and further claims the benefit of U.S. Provisional Application Serial No. 60/137,988 filed June 7, 1999, the disclosures of both of which are incorporated herein by reference in their entirety.--

Please replace the paragraph at line 3 of page 5 with the following amended paragraph:

--In order to terminate a TCP connection, when an application closes a connection, the TCP software associated with that application sends a packet having a finish (FIN) bit set, referred to as a FIN packet, to the TCP software on the other side of the connection. The TCP software of the machine that receives the FIN sends an ACK to the FIN and informs the application that a FIN has been received. If the application is finished sending data, the application closes the connection. In response to the application close, the TCP software sends a FIN to the TCP software that sent the original FIN. In response to receiving the FIN, the TCP software sends

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an ACK. Once this ACK is sent, the connection is considered to be closed by both sides of the connection.--

Please replace the paragraph at line 16 of page 6 with the following amended paragraph:

--The present invention includes methods and systems for communicating SS7 messages between signaling nodes over a packet-based network using a transport adapter layer interface (TALI). As used herein, the phrase transport adapter layer interface refers to an interface that resides above the transport layer in the TCP protocol stack that facilitates integration between the SS7 protocol stack and the TCP/IP protocol stack. Such an interface includes functionality for prohibiting and allowing communications over a socket without invoking conventional TCP connection establishment and termination handshaking procedures. In addition, the interface provides monitor and test messages that are respectively used to measure performance and test the status of a connection. The interface also provides a mechanism for encapsulating SS7 messages that allows individual message identification over a stream-oriented connection.--

Please replace the paragraph at line 20 of page 10 with the following amended paragraph:

--MGCs **216** and **218** control MGs **210**, **212**, and **214** using a control protocol. An example of a control protocol that may be implemented by MGCs **216** and **218** is the media gateway control protocol as described in Media Gateway Control Protocol (MGCP), <http://search.iptf.org/internet-drafts/draft-huitema-mojaco-mgcp-v0r1-05.txt>,

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February 21, 1999, available on the Internet Engineering Task Force (IETF) website.

ISP **220** provides Internet services to subscribers. Accordingly, ISP **220** may include a network access server to provide user access to the Internet.--

Please replace the paragraph at line 1 of page 12 with the following amended paragraph:

--Link interface module **300** includes a number of processes for sending and receiving SS7 messages over SS7 links. In the illustrated embodiment, link interface module **300** includes ~~[[MTP]]~~ message transfer part (MTP) level 1 and 2 process **307** for performing SS7 layer 1 and 2 processing of incoming messages. I/O queue **308** enqueues incoming and outgoing SS7 messages. Message discrimination process **309** determines whether incoming messages are addressed to signaling gateway **224** or to another node. For example, message discrimination process **309** may analyze the SS7 destination point code in an incoming message to determine whether the message is addressed to signaling gateway **224** or to another node. If message discrimination process **309** determines that the message is addressed to signaling gateway **224**, message discrimination process **309** forwards the message to message distribution process **310**. Message distribution process **310** routes the message to another internal module for further processing.--

Please replace the paragraph at line 8 of page 16 with the following amended paragraph:

--TALI protocol stack **418a** includes MAC, network, transport, TALI, and SS7 layers **426**, **428**, **430**, **422**, and **424**, that are identical to the correspondingly

numbered layers described with respect to Figure 4(a). However, TALI protocol stack **418a** includes signaling ATM adaption layer (SAAL) **454** to provide sequencing of SS7 data transferred across a TCP/IP connection. When TALI protocol stack **418a** is implemented without SAAL layer **454**, as illustrated in Figure 4(a), the SS7 sequence number, which is included in the SS7 MTP2 header, is not transferred across a TCP/IP connection. This sequence number is used to preserve message sequencing and to support complex SS7 procedures involving [[MSU]] message signal unit (MSU) retrieval during link changeover and changeback. Changeover is an SS7 procedure whereby a link request is sent over one SS7 link to move SS7 traffic from that link to another SS7 link. Changeback is an SS7 procedure for moving the SS7 traffic back to the original link. TALI protocol stack **418** illustrated in Figure 4(a) without SAAL layer **454** still guarantees correct sequencing of SS7 data because TCP layer **430** provides sequencing of TCP segments that carry the SS7 traffic.--